

1. Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended). A resonant power LED control apparatus comprising a single resonant converter ~~for the configured to provide~~ simultaneous, independent brightness and color control of two LEDs or two groups of LEDs, wherein the converter comprises a half or full bridge DC/AC converter with a control unit, a resonant capacitor, and a transformer, wherein at least one first LED of the two LEDs or two groups of LEDs conducts a first current only during a positive half-cycle of a secondary voltage across at least one secondary winding of the transformer, and at least one second LED of the two LEDs or two groups of LEDs conducts a second current only during a negative half-cycle of the secondary voltage.
2. (Cancelled).
3. (Cancelled).
4. (Previously Presented). A resonant power LED control apparatus as claimed in claim 1, wherein each of the two LEDs or two groups of LEDs comprises several LEDs joined together into groups of arrays connected in series.
5. (Previously Presented). A resonant power LED control apparatus as claimed in claim 1, wherein a voltage supply of the two LEDs or the two groups of LEDs takes place via the at least one secondary winding of the transformer.
6. (Previously Presented). A resonant power LED control apparatus as claimed in claim 1, wherein the two LEDs or the two groups of LEDs are connected to the at least one secondary winding in antiparallel.

7. (Previously Presented). A resonant power LED control apparatus as claimed in claim 1, wherein the two LEDs or the two groups of LEDs are connected to the at least one secondary winding of the transformer such that they are supplied with current in succession.
8. (Previously Presented). A resonant power LED control apparatus as claimed in claim 7, wherein the transformer comprises a central tap at a secondary side, the central tap being connected to a common anode or cathode of the two LEDs or the two groups of LEDs.
9. (Previously Presented). A resonant power LED control apparatus as claimed in claim 8, wherein a further LED is connected as a main light source between the central tap and the common cathode or anode of the two LEDs or the two groups of LEDs, wherein the two LEDs or the two groups of LEDs serve as subsidiary light source LEDs.
10. (Previously Presented). A resonant power LED control apparatus as claimed in claim 9, wherein a switching diode is used instead of one of the subsidiary light source LEDs.
11. (Previously Presented). A resonant power LED control apparatus as claimed in claim 6, wherein colors of the two LEDs or the two groups of LEDs comprise white and amber/orange.
- 12.-16. (Cancelled).
17. (Previously Presented) An apparatus, comprising:
a transformer having a primary winding and at least one secondary winding;
at least one first light source coupled to the at least one secondary winding so as to conduct a first secondary current and thereby generate first light only during a positive half-cycle of a secondary voltage across the at least one secondary winding;
at least one second light source coupled to the at least one secondary winding so as to conduct a second secondary current and thereby generate second light only during a negative half-cycle of the secondary voltage;
a resonance circuit coupled to the primary winding for providing a resonance current through the primary winding; and
a controller coupled to the resonance circuit for providing to the resonance circuit at least

one control signal having a variable duty cycle,

wherein:

the resonance current is based at least in part on the variable duty cycle of the at least one control signal; and

the variable duty cycle of the at least one control signal is based at least in part on at least one of a first feedback signal associated with the at least one first light source and a second feedback signal associated with the at least one second light source.

18. (Previously Presented) The apparatus of claim 17, wherein the first feedback signal and the second feedback signal are optical signals.

19. (Previously Presented) The apparatus of claim 17, wherein the first feedback signal comprises a first measured value of the first secondary current and the second feedback signal comprises a second measured value of the second secondary current.

20. (Previously Presented) The apparatus of claim 17, wherein each of the at least one first light source and the at least one second light source comprises a plurality of LEDs.

21. (Previously Presented) The apparatus of claim 17, further comprising at least one third light source coupled to the at least one secondary winding so as to conduct a third secondary current and thereby generate third light during both the positive half-cycle and negative half-cycle of the secondary voltage.

22. (Previously Presented) The apparatus of claim 21, wherein the third light source is a white LED.

23. (Previously Presented) The apparatus of claim 22, wherein the first light source is a red LED and the second light source is a blue LED.

24. (Previously Presented) An apparatus, comprising:

at least one first light source coupled to at least one secondary winding of a transformer so as to conduct a first secondary current and thereby generate first light only during a positive

half-cycle of a secondary voltage across the at least one secondary winding;

at least one second light source coupled to the at least one secondary winding so as to conduct a second secondary current and thereby generate second light only during a negative half-cycle of the secondary voltage; and

at least one third light source coupled to the at least one secondary winding so as to conduct a third secondary current and thereby generate third light during both the positive half-cycle and negative half-cycle of the secondary voltage.

25. (Previously Presented) The apparatus of claim 24, wherein the third light source is a white LED.

26. (Previously Presented) The apparatus of claim 25, wherein the first light source is a red LED and the second light source is a blue LED.